

of Missouri, Kansas, Iowa and Nebraska, the center of maximum frequency being near the point of union of these four States, or about a hundred miles east of the geographical center of the United States is the tornado area. According to the reports of the United States weather bureau, tornadoes occur more frequently in May, April, June and July, in the order named, the most violent ones thus far recorded having happened in April and the greatest number in May. Already tornadoes have occurred this season in this territory, accompanied by much damage to property and loss of life.

A tornado is the concentration of storm energy. It is the most destructive and the most sudden in appearance of all forms of atmospheric disturbance, and is least easily recognized in its early stages, even by the expert. A tornado and an electric storm arise from the same general conditions, and in the beginning cannot be distinguished one from the other. They often are identical up to a certain point and are deflected into the one or the other by local conditions with which the general cyclonic storm comes in contact in its passage from one point to another.

Edward H. Bowle, chief of the St. Louis weather bureau, has made a special study of the subject of tornadoes and is in a position to speak with authority regarding them.

"I think," said he, "it would be well to bring out one point in the beginning of this subject, and that is the difference between tornadoes and cyclones. The sort of windstorm that is popularly called a cyclone is not a cyclone at all, but is a tornado. The tornado is the storm that makes its. appearance in the form of a funnelshaped cloud, while the cyclone is a general storm, or an area of low barometric pressure. The word cyclone means a revolving wind, it is true, and a cyclone is a revolving wind. only the revolution covers a much greater area than that of the so-called

"twisters,' or tornadoes. A cyclone may be a thousand miles in diameter, while a tornado may not be more than a hundred feet. THE CYCLONE.

The cyclone is the parent of the tornado. It is the general condition that produces the tornado. There is al-



and the water allowed to run out, only | from Russia, Austria, Sweden, Spain the air whirls upward to the center at and where not; its chemical analysis the top of the cloud instead of down- does not seem to yield reliable informaward, as in the case of the water, tion, for its active constituents are not The gyratory motion begins in the up- definitely understood. Finally, the per strata and gradually descends, physiological activity of the drug mr.y be good, or little, or zero, just as it forming the funnel-shaped cloud that we know. The velocity of the air as may chance, while after the lapse of it whirls upward to the center is from a year it becomes unfit for use. Yet 200 to 300 miles an hour; that is, we it is to this substance, so utterly variaestimate that it is as great as that by ble, that the physicians must trust the the effects it produces. We know what life of the woman and the child."effects are produced by wind of any

measurable velocity, and, using that as a basis, we estimate a tornado's velocity by the character of damage result-

ing from it." HIGH JUMPS AT VASSAR.

1901.

men

got 13.

Girl Atelete Makes New Record in aulting and Putting the Shot. Mildred Vilas, '07, of Cleveland, O., and Inez Milholland, '09, two of the most popular students, established new athletic records at Vassar Saturday. says the New York World. Miss Vilns made a fence vault of 4 feet 10% inches. The previous record was 4 feet 1014

inches, made by D. E. Merrill, '02, in Miss Milholland, a beautiful English work in England, and who is regarded as one of the strongest women ever at the college, put the eight-pound shot 31

White in 1902.

The surprise of the day was the poor and helps to draw people who would showing of the two present students as surely be repelled, if not driven ways a cyclone somewhere in the Unit- who hold championships, Alice H. Bel- away, by a store slackly kept. And ed States. Without it this country ding, '07, holder of two records, 7 feet now suppose this boy keeps right on so, Tell the superi would dry up, for the cyclones bring 6 inches in standing broad jump and unflinchingly; suppose he shows that there, and that I want him to give 195 feet 3 inches in baseball throwing, he's really got the stuff in him; why, you a job among the boys who lift the and Martha Gardner, '07, holder of he gets the first chance there is for a soft clay bricks from the moving plat-100-yard hurdle record, 16 1-3 seconds, step up, for the demand for men who form or belt, just as they come from and running broad jump, 14 feet 61/2 | can do things is greater than the supthe machine, and place them in the inches. Neither champion was able to ply, and then if he will only keep on racks. It's lively work, but there is equal her record, while in the hurdle doing things the way he began he's something in the atmosphere of fresh race and baseball throwing they were got his future in his own hands. lay, or in the handling of it, perhaps, surpassed by sophomores and fresh-"What is true of the boy sweeping that's just what you need. Take what the store is equally true of every other ever he offers you, if it's only a dollar The sophomores won the honors of boy, in whatever work he may be doday." the day, exceeding their own best ex- ing, absolutely; for the whole secret "I'll do It!" pectations with 43 points. When it was of success lies in doing whatever your It was several weeks before Dr. Simannounced that 1907 had won 23 points hands find to do well and faithfully. mons saw him again. a mighty shout of "skidoo" went up "This is an old, old, oft-told story, I "Hello, Jordan !" he said, when he from the side lines where the sophoknow, but there's a fresh crop of boys met him. "You haven't told me anymores were cheering their successful coming into the field daily, to whom, thing about your ailments lately." athletes; 1910, won 20 points and 1908 ever, it must be new, and if but one of "My ailments!" exclaimed the other. each day's crop would take the old 'Good land! Do you know what kind story to heart the world in general of job that brick-jerking is? I haven't would be better off and the boy himself had time to talk about my allments, would profit by it greatly." Vastly Important Drugs Should Be or even think of them, for a whole month, and every last one of 'em has OUR GLOBE'S CAPACITY. left me !"

CYPRESS KNEES.

top and flattened sides give it very much the shape of a human leg bent at

the knee till thigh and calf are brought

together; hence the appropriate name

as to what part the knees played in

the life of the cypress tree, writes a

correspondent of Forest and Stream,

for they are part of the root system

and do not grow independently. They

were not sprouts, trying to grow into

trees, for they never developed

branches; and the final conclusion was

that their only use was for people to

stumble over. How and why such use-

less appendages to the tree were form

ed was a mystery until one day, when

drifting down a deep channel which

had been washed through a cypress

The earth had been washed away

from the roots of some of the trees,

and roots in all stages of growth were

in sight. None of these roots was less

than 214 inches thick and of uniform

size clear to their tips, or rather clear

to their blunt ends, for there was no

Nature intended these roots to grow

in soft mud, and they were all right

for that purpose, but when the blunt

end of a root encountered something

too hard to push through it bent or

buckled in the line of least resistance,

and this was generally toward the top

swamp, the secret was exposed.

For a number of years I was curious

of "knee,"

They Are Formed - Trees' How Curious Blunt Roots,



BUILDING FOR TO-MORROW.

O the European eye American towns and villages have the appearance of temporary structures. Even in New England, rich in stone, most buildings, except in the crowded parts of large cities, are of wood. Old and much traveled highways cross streams over wooden bridges, which last but a few

years. During the first three months of this year the fire losses in the United States and Canada amounted to sixty-four million dollars, ten millions more than for the corresponding three months of last year. Ever year cities on the inland rivers sustain enormous losses from floods, losses greater in the aggregate than the cost of preventing by proper embankments and other means the disastrous effects of the floods. Everywhere is evidence of a disposition on the part of Americans to build for to-day rather than for to-morrow,

The reason for this is that America has not wholly outgrown the spirit of ploneer days, when shelter had to be thrown together for the night. People needed houses faster than they could build them. . There was not time to use brick and stone. The habit of hasty, Impermanent building is fastened upon us; wooden houses of the flimsiest kind rise and decay like mushrooms.

Permanence and stability come with age. The American is taking more time to think of the future, he is beginning to build more solidly. One sign of this is the attempt to introduce into many American citles architectural plans for streets and water fronts which shall give order and direction to growth for a thousand years. The American imagination is gaining in scope and steadiness .--- Youth's Companion.

THE HEAD OF THE FAMILY.



RITISH philosophers are discussing the question of who should be the head of the family and appear to have agreed that the husband should be that official. The reasoning is to the effect that every family should have one supreme will, and that the

husband, being the stronger and abler, is best fitted to exercise it. The wife should obey like a soldier under orders, never questioning the wisdom of the command, but executing it blindly, and if the household goes to smash the responsibility is not her's.

This is a patriarchal method of disposing of the matter, quite like the British mode of reasoning on all subjects. It may work well in England, but it would never do in the United States, at any rate as a rule of conduct. In this country wives are not so constituted as to be submissive slaves to their husbands. Here they will obey their husbands if their own judgment approves his decision, but if it does not they never hesitate to act otherwise than he has directed. Perhaps this habit of American wives may have some-

A BABY IN SPAIN.

He Happens Along at an Especially Favorable Period. The very youthful heir to the Span-

the big brickyard just outside of town. Ish throne seems to be in a fair way to ane some of the family tradition you

thing to do with the great and increasing number of divorces that take place in the United States. If women were accustomed to being treated like slaves all the time it is possible that they would seldom get up courage enough to seek relief from their marital bondage. Thus, if divorce is really the disgraceful thing it is accounted in some quarters, it may be argued that the British custom is better than our own.

But if the happiness and peace of mind of women are worth anything, the American way is more likely to serve the whole people. Why should a woman married to a man of bad judgment consent to sink with his ship when she sees the danger and, after having done everything in her power to avert it, she has the power to CSC3DC.

The American wife is willing to let her husband be the head of the family so long as he shows himself competent to fill that position, for that is woman's nature, But when he shows that he is incompetent she insists upon the right to direct her own career .-- Chicago Journal.

THE HORSE VS. THE AUTO.

HEN San Francisco was burning the automobile had its day of fame. It hurried hundreds of men and women and millions of valuables out of the path of the flames. 29/26 But an automobile cannot climb a 45 per cent grade out of a cellar with a load of debris. The days of San Francisco's re-

building are the days of the horse-his days of glory closing in the night of death.

Before the ashes were cold the rallways were ready to run tracks on which to haul away the rubbish. Contrivances were invented for lifting and dropping it into cars. But there still remained millions of loads of crumbled walls which, if what had been sixty years bringing in was to be taken out in three, must be drawn up and out by horses. And so San Francisco's cry to-day is not for money or sympathy, but for horses and still more horses .- Chicago Inter Ocean,

COMMON SENSE IN DIET.

man was created for a varied and mixed diet, he has abundant opportunities for selecting his food and supplying his individual needs. In most cases appetite is the surest guide to healthy digestion and prop-1. 60 M er nourishment. This certainly is the common sense view that must appeal to all rational feeders: "Eat with regularity and in accordance with the demands of hunger such dishes as have always been regarded as innocuous and remember that, as a rule, it is neither meats nor bouillon nor wine nor spices nor coffee which polson us, but their abuse."-New York Herald.

INNOCENT VICTIMS OF LAW. than she has enjoyed for years. It would appear that she is much better

off without the lost colonies than with | Hanging and Suicides Result from them, that long relief from civil and Untrue Circumstantial Evidence. What will undoubtedly go into the foreign wars is her greatest need. Given repose, she should make substantial books as a classic instance of the maprogress, industrial and political. A lignant significance which even the simpeople who accordingly to an eminent plest, most natural actions may as sume when viewed in relation to a Mexican have furnished his country with its most thrifty, capable and succrime and a search for the perpetrator cessful of tradesmen and merchants in which the only reliance is circumstantial evidence is that reported from should be able to forge ahead if given Nordburg in Prussian Schleswig. August Deppe was a clergyman's son Whatever the future may have in who was troubled with insomnia and store for Spain, or its royal family, it was his custom to take long walks however, there is no disguising the fact at night. One night a young girl was strangled in the town and August's absence from his own home about the time the murder must have been committed, together with localities in which he had been seen, directed suspicion in his direction. Having been placed under arrest, the police of course were successful in discovering divers other circumstances pointing to his guilt and he was convicted and hanged. It would seem that fate would have rested content after having been instrumental in occasioning so frightful a blunder, but it was only the beginning of her orgie of sardonic gayety. The clergyman father spent the entire night before the execution in giving the comfort of his presence and spiritual consolation to the unfortunate son and on going home after the ordeal killed himself. A brother of the young man, having been dismissed from the army on account of his relationship to the fatal influence of the original blunder continued to be exerted until the death of no less than six blameless persons could be traced directly to the original sacrifice of an innocent man.

Robert Kennedy Duncan in Harper's. ROAD TO FORTUNE. Here Pointed Out More Especially to Boys, but It Is Open to All. "It's hard work," said the boss to a New York Sun writer, "to get anybody

to do even the simplest things really well and to keep on doing them so; and I do love to meet people who do the work they have to do, no matter what it may be, thoroughly and who have, besides, the sense and nerve to keep at

It that way steadily. "It is a positive delight to me to find a boy that makes a good job of sweeping out the store, who is not satisfied with giving it a lick and a promise-

sweeping out the thick of it from the girl, who is taking a course at Vassar middle of the floor-but who digs into in preparation for woman's suffrage the corners and sweeps clean along the edges and makes a good, thorough, workmanlike job of it all through.

"Now, that sort of job of sweeping feet 8¼ inches, breaking the record of is a positive help to the business; it 29 feet 111/2 inches, made by E. H. make the store attractive, it actually gets into the atmosphere of the place

of the ground, and the continuing growth of the root pushing the bend further upward made the bend closer, until finally the two arms of the bend were close together and they grew toing both.

gether, with one shoot of bark enclos-OFF HIS MIND.

Something was always the matter with Mr. Jordan. When he was not

suffering from excruciating pains in his back or chest, or groaning with an attack of indigestion, he was threatened with inflammatory rheumatism, appendicitis, or something equally terrible. He could talk by the hour about his miseries, and frequently did.

"I know what will cure you of all these ailments you have been telling me about," said his friend, Dr. Simmons to him one day; "but it wouldn't

do any good to recommend it to you." "I'll promise to do anything you sugrest," vowed Mr. Jordan, "if it's some-

thing that isn't beyond my powers." "I will answer for that. You go to

"I thought so. You may guit now,

You're cured."-Youth's Companion.

COACHED TOO STRONG.

The Colonel Was Not Used to Such

Brig, Gen, Andrew S. Burt of the

United States army is an enthusiastic

sportsman, whose hobby is baseball.

Prior to 1898, when he became a briga-

dier, he was the commanding officer of

a negro regiment of regular infantry.

Each company had its ball team, and

the colonel was an enthusiastic rooter

One day a contest was on which was

marred by the poor playing of a mem-

ber of one of the company teams, Burt,

disgusted, volunteered to take the place

of the incompetent. No one objected.

At the bat the colonel was given a base

on balls. He noted that the men on

the coaching lines kept slient while he

was on the bases, and after he had

"See here," he exclaimed, slipping

out of his coat. "I've taken off my

made the circuit he remonstrated :

| Language from Subordinates.

ent I sent

us our rains. If you examine a weather map you will see certain sections marked 'low.' These are the areas of low pressure, the storm centers or cyclones, and if you will look further you will find that all the little arrows which show the direction of the wind in the different localities around this 'low' region point in a direction generally slanting toward the center of the area marked 'low,' circling from right to left, or opposite to the hands of a clock. That means that the equilibrium of the atmosphere is disturbed, but not violently, and that the motion is in a generally rotary direction, but horizontal rather than vertical. These storm centers move across the country from day to day, in a generally northeasterly direction, and the atmospheric conditions which they encounter en route are the immediate causes of violent storms of one kind or another. Sometimes it is a severe thunderstorm and sometimes it is a tornado. These storm centers, or cyclones, extend over Plarge areas, varying from 300 or 400 miles to a thousand or more miles in

diameter. WHERE TORNADOES ORIGINATE.

"Tornadoes always originate in the southeast quadrant of these areas of low pressure, usually due southeast of the center, at a distance of from 200 to 225 miles, and they, like the parent cyclone, travel in a generally northeasterly direction.

"The tornado travels ten or a hundred miles, and is dissipated in a few hours, while a cyclone may travel for days and cover thousands of miles of territory in its progress. The Galveston hurricane is an instance of this. That storm was first observed southeast of the island of Porto Rico on September 1. It moved westwardly with the general drift of the air, was deflected from its normal course up the Atlantic coast by a bank of cold Air over the eastern States, and on September 10 was in northern Texas. passed over the great lakes and the St. Lawrence valley as a storm of marked intensity and was dissipated somewhere off the coast of Canada. A hurricane is an intensified cyclone.

"A tornado is caused by a very unstable local condition of the atmosphere. The warm, moist air rises and comes in contact with the descending from a maximum to nothing at all. cold stream of alr above. Breaking through this cold stratum, it rushes into the opening, and the heavy, cold air rushes down to fill the space formerly occupied by the heated air, producing a whirling motion similar to that in a stationary washbowl of ing upon rye, where it destroys and diswater when the stopper is removed places the ovary of the plant. It comes

GOOD MEDICINES.

Trustworthy.

"No; because any man, however 1gnorant, with any motive, however ignoble, may manufacture and sell any of the 50,000 compounds known to organic chemistry, and may allege for them what curative powers he will, and because, too, of this unlimited opportunity for fraud among the older

drugs, it becomes a matter of no surprise to learn that at the present time among the great number of firms manufacturing remedial agencies there is the greatest conceivable diversity in science, sincerity and wisdom. "These drugs come from the utter-

most parts of the earth-from the dark forests of Brazil, from the frozen Siberian steppes, from the banks of the 'gray-green, greasy Limepo river, all set about with fever trees,' or from 'silken Samarkand'-but almost everywhere they are gathered by barbarous peoples, the lowest of earth's denizons, It is small wonder, then, that with any one plant there should be a variation among its individual specimens in the proportion of the active medicinal agent it contains. But when we add to this the fact that, in general terms, It then recurved toward the northeast, the per cent of the active lugredient depends on the amount of sunshine it enjoys, on the time of the year It is gathered, even on the time of the day, on the amount of moisture, the elevation, the character of the soli, and a

dozen other factors, it becomes almost a necessity of thought that the amount of 'medicine' in that plant must vary

"A man's wife goes bravely down to the gates of death to pass through. or, it mayhap, to come slowly back, bearing radiantly with her the flaming torch of another life. Ergot is required. Now, ergot is a fungus grow-

The Time When the Earth Will Be Fully Peopled.

Professor Ravenstein of the Royal Geographical Society estimates that the fertile lands of the globe amount to 28,000,000 square miles, the steppes to 14,000,000 and the deserts to 1,000,-000.

Fixing 207 persons to the square mile for fertile lands, ten for steppes and one for deserts as the greatest population that the earth could properly nourish, the professor arrives at the conclusion that when the number of inhabitants reaches about 6,000,000,-000 the earth will be peopled to its full capacity. At present it contains somewhat more than one-quarter of that number.

If the rate of increase shown by the latest census statistics should be uniformly maintained, Professor Ravenstein shows that the globe would be fully peopled about the year 2072 .--New York Tribune. . .

Imagination.

Bacon-The author of that new novel has a wonderful imagination. Egbert-Why, have you read the book?

"No, but he said that 10,000 copies of the volume had been sold."-Yonkers Statesman.

"I can think of nothing?" "Fix it on me."

Plain Dealer.

s not always the great foy to the slouchy people who make most of her work, that she imagines she is.

She Said Nothing. "Now fix your mind on something." "That's what I said."-Cleveland

A neat and particular housekeeper

A POPULAR EVOLUTION.

shoulder straps now, and you fellows want to treat me just as if I was a private." Again Burt was at bat. He hit the ball and started for first. "Run, you gimpy-legged, sawed-off mud turtle! Run, you ----- mlser-

at the games.

able ----- !" howled one of the coachers, Burt reached first safely, turned and

regarded the coacher for an instant, then left the base, walked over to where his discarded blouse lay, and put it on. He said nothing, but the negions understood.

Helping On His Finish.

"You'll find I'm hard to discourage," said the persistent suitor, melodramatically. "Some day I'll make you admit you love me and then-and not until 1 then-I will die happy." "I'll sny it now," replied the heart-

less girl. "I don't mind telling a lie for a good end."-Philadelphia Ledger.

A Belligerent Friendship,

"Johnnie, have you a speaking acquaintance with the new boy next door?"

"No, ma'am-just a fightin' acquaintence."-Cleveland Plain Dealer.

In the present condition of Spain there are no indications that his mother will have to hurry over the border with the child in her arms because of differences of opinion among troublesome statesmen over matters of politics and personal preferment. There is no fusiliade

half a chance. around the palace that indicates any unpleasant temper on the part of the



KING AND QUEEN OF SPAIN.

from threats and menaces as any of Spanish princes. He may be considered more fortunate, too, than a czare- with her in her motherhood as they did witz, who must grow up while uncertain dumas are meeting and keep de- chist's bomb. The fair young Queen bating with himself whether he is an

Probably, also, it is fortunate for Spain that the succession is so early established, though no horoscope can tell just how much of a prize the baby will prove to be. At any rate, steadl-

country seems to have fairer prospects | Baltimore American.

Now a desperate and notorious criminal has confessed that he strangled the girl.-Detroit Free Press.

Desert and Swamp Lands.

According to official figures, since the reclamation law was enacted by Congress in 1902 eight towns have been built and 10,000 people have settled on what were desert lands. To prepare the way for these settlers 100 miles of branch railways have been built, 1,267 miles of canals have been dug, many of which carry whole rivers, and fortyseven tunnels have been excavated.

It is estimated that the territory embraced in what is known as the arid regions of the United States covers 600,000,000 acres, of which about 60,-000,000 acres are subject to irrigation, which, when properly supplied with water, can be converted into farms, fully as productive as lands in the most favored sections.

A bill was introduced in Congress at the last session for the purpose & reclaiming overflowed and swamp tands in Wisconsin, Arkansas, Indiana, Minnesota, New Jersey, North Carolina, South Carolina and other States, and those back of it say that it will be "pushed" at the next session.

The member who offered this measure roughly estimates the amount of overflowed and swamp lands to be reclaimed at 50,000,000 acres, the reclamation of which would increase the land value more than \$5,000,000, the annual crop value \$1,500,000,000 and, if subdivided into forty-acre farms, would supply 2,500,000 families with homes and put 12,000,000 people on lands now practically worthless.

A boy never cares much for the books his teacher advises him to read

populace. There is no fear of a sinis- that the whole nation is happy over the

exile during which the country might Victoria Eugenic, is at present the most In fact the little infant is as free the royal family of Spain, for her marthose other bables, and in this respect deluded wretch to kill her and her hushe is exceptionally fortunate among band; and now that she has given an

ness in the government is, desirable, and in this era of good feeling the

be kept in a state of fierce dissension

and civil war.

autocrat or not.

popular woman in the kingdom. Inauspicious indeed was her entry into

heir to the nation, the people rejoice when as a bride she escaped the anar-

promises to be one of the most popular of Europe's royal rulers,

Faitz all her own hair?"

"Yes, it's entirely her own. She made the last payment on it yesterday."-

ter pretender all prepared to add spice birth of an heir to the throne. The reto life by leading a hold peasantry to joicing of the people is enthusiantic and revolt. There is no prospect of a long sincere and the young Queen mother,

riage was attended by the attempt of a

granddaughter of Victoria of England

Indubitable Proof.

